

be given to the works of the present day, contains an immense mass of information, with descriptions of many of the birds which are now receiving names as entirely new. We must notice one little error in the second part. Speaking of *Clangula Barrovii*, it is said, "We believe only one specimen is in England, and it has hitherto only been found in the valleys of the Rocky Mountains;"—a beautiful male specimen of this rare bird was shot some years since in Iceland by Mr. Atkinson; so that its range is more extensive.

The third part of the work, "Two centenaries and a quarter of birds either new, or hitherto imperfectly described," has no connection with the first or second parts. The short specific descriptions are a little troublesome, from having the species mixed up together, and not generically arranged; and it is less useful than it might be from the want of synonyms; for though many are new, many are also described and indicated in other works: for instance, *Platyurus niger* seems to be *Scytalopus fuscus*, Gould, Proc. Zool. Soc. for 1837; *Ramphapis Melanogaster* is the same with Lefresnaye's *M. dimidiatus*, figured in the *Magazin de Zoologie* in the beginning of the last year; *Aglaiia melanotis* is very like D'Orbigny's *Tanagra Schrankii*, &c.; *Crypticus "Superciliosus,"* should be *C. Superciliaris*, at least so Mr. Sandbach named it. Some of the birds again scarcely require to be introduced as little known; *Leistes Suchii*, here called *L. oriolooides*, has been at least twice figured, and several times described.

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#### APRIL. Zoology.

I. *Analysis of Fossil Scales from the old red Sandstone, Clashbermie, Perthshire.* By A. Connell, Esq. The most curious fact in the analysis of these scales is, that the ratio of the phosphate to the carbonate of lime is in the proportion nearly of thirteen to one, and similar to two out of three analyses of recent fish-scales by Chevreul. Of the animal matter there remained only a "trace."—II. *On the organized bodies found in the mineral fluid of Animals, and their analogy to the pollen of Plants.* By G. R. Treviranus. (Taken from Tiedemann and Treviranus's *Physiological Journal*.) The paper endeavours principally to establish the analogy between the fertilizing particles of the productive parts of plants and animals.—III. *Further Observations on the Unity of Structure in the Animal Kingdom, &c.*

By Martin Barry. Additional illustrations of the author's views on this subject.—IV. *On the Development of the Decapodes*. By H. Rathke. This short paper is the contents of a letter written to Professor Müller, and is a rough sketch of observations made by the author on the shores of the Black Sea and at Dantzic. The result of these researches are rather opposite to those of Mr. Thompson: he concludes by saying, "All the *Isopodes*, with whose development I am acquainted, come into the world with fewer bones than they exhibit in their state of maturity. These animals, we can say with justice and reason, enter the world in an extremely imperfect condition; but as to the Decapods, so far as I have examined their development, I must deny such an assertion; and of them I can say nothing less, than at the end of their existence in the egg they have exactly the same aspect, and are as fully developed, as the full-grown individuals."

#### Botany.

*Contributions to the Botanical Geography of Southern Europe*, by Professor Link, (translated from Wiegmann's *Archiv für Naturgeschichte*, 1836,) and Dr. Graham's list of new and rare plants which have flowered in the neighbourhood of Edinburgh, are the only botanical communications.

#### JULY. Zoology.

I. *On Unity of Function in organized Beings*. By William Carpenter, M.R.C.S., Sen. Pres. of the R. Med. Soc., Ed. A paper of considerable merit, suggested by those by Dr. Barry on the "unity of structure."—II. *Organic Remains in the old red sandstone of Fife*. By the Rev. John Anderson, Minister of Newburgh.—III. *On the Fossil Organic Remains found in the Coal formation of Wardie, near Newhaven*. By R. Patterson, M.D. This paper refers to both the remains of plants and animals. The chief plants are *Filices*, with the genera *Calamites*, *Lepidodendron*, *Lepidophylla*, *Polyperites*, and *Knorria*, besides "many which we have been unable to name." Among the animals are abundance of Entomostraca, belonging to the genera *Cypris* and *Daphnoidea*, and the author considers the occurrence of these two, in conjunction with sea-shells and corallines, as an argument against the fresh-water or lacustrine formation of Burdie-house, as adopted by Buckland and Dr. Hibert from the immense deposit of Entomostraca without any marine productions. Five or six genera of fishes with coprolites are also stated to occur.—IV. *Notice of the result of an experimental Observation made regarding equivocal Generation*. By F. Schulze. An experiment performed with distilled water, mixed with various animal and vege-

table substances. Germs, &c. were destroyed by heat (212° F.), and the introduction of matter was prevented by other contrivances, while the exposure to atmospheric air, light, and heat was continued. Three months produced *no living creature*; but a few days after the inclosed matter had been exposed, many Vibriones and Monades, with "larger polygastric infusoria," were noticed.—V. *On the Sivatherium, a new fossil ruminant genus found in tertiary strata in the Valley of the Markanda, in the Sivalik branch of the Sub-Himalayan Mountains*, contains only remarks from sources already published.—VI. *On the colossal fossil Mammiferous Quadruped named Dinotherium giganteum*. Extracted from Buckland's Bridgewater Treatise; Blainville and M. Rauss, in the 'Comptes Rendus.'—VII. *Account of the Skull of a Fossil quadrumanous Animal, found in the tertiary rocks of the Sub-Himalayan hills, near the Sutlej*. Extract from Journal of the Asiatic Society.

#### Botany.

I. *On the condition of Fossil Plants, and on the process of Petrification*. By H. R. Göppert. Translated from Poggendorff's *Annalen*.—II. *Remarks on the Origin of Amber*. By the same author, and from the same source. The author here considers "that amber is nothing else than an indurated resin derived from various trees of the family of the Conifera; which resin is found in a like condition in all zones, because its usual original depositories, viz. beds of brown coal, have been found almost everywhere under similar circumstances."

#### OCTOBER. Zoology.

In this number there is little relating to zoology or botany. The only paper which comes under our range is, I. *Analysis of the Scales of the fossil Gavial of Caen in Normandy*. By A. Connel, Esq., F.R.S.E. In the result of his analysis Mr. Connel considers that "these scales were originally of the nature of bone, and in all probability analogous to the osseous bones of fishes;" and he suggests the more detailed inquiry whether the coverings of the extinct and recent Saurians are identical. In the 'Scientific Intelligence' there is a notice by M. Baer, of the Prussian and Polish aurochs being found in the Caucasus. No botanical papers in this number.